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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--|-------------|----------------------|-----------------------|------------------|
| 10/713,070 | 11/17/2003 | Kia Silverbrook | ZG014US | 6279 |
| 24011 | 7590 | 05/24/2004 | EXAMINER | |
| SILVERBROOK RESEARCH PTY LTD 393 DARLING STREET BALMAIN, 2041 AUSTRALIA | | | GORDON, RAQUEL YVETTE | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 2853 | |

DATE MAILED: 05/24/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Aⁿ**Office Action Summary**

Application No.

10/713,070

Applicant(s)

SILVERBROOK

Examiner

Raquel Y. Gordon

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11/17/2003 (Application & IDS).
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 and 2 is/are rejected.
- 7) ☒ Claim(s) 3-7 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 November 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☒ Certified copies of the priority documents have been received in Application No. 10/302,556.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date <u>11/17/2003</u> . | 6) <input type="checkbox"/> Other: _____ |

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1 and 2 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 1-3, 5, and 6 of U.S. Patent No. 6666543 in view of Silverbrook (US 6588882 B2). U.S. Patent No. 6666543 teaches:

a micro-electromechanical device that comprises: a substrate that incorporates drive circuitry (claim 3/2/1)

a motion transmitting structure that is fast with the movable end of the actuator, the motion transmitting structure being connected to a working member so that movement of the actuator is translated to the working member (claim 5); and

a covering formation that is positioned on the substrate so that the substrate, the covering formation and the motion-transmitting structure define an air chamber, the actuator being positioned within the air chamber (claim 1);

in which the covering formation includes walls that extend from the substrate and a cover that spans the walls, the motion-transmitting structure being shaped so that the cover and the motion-transmitting structure being shaped so that the cover and the motion-transmitting structure define generally co-planar surfaces that are spaced from, and generally parallel to the substrate, an opening being defined between the cover and the motion-transmitting surface to facilitate relative displacement of the cover and the motion-transmitting surface (claims 5 and 6).

However, the difference is an elongate actuator that has a fixed end that is connected to the substrate so that the actuator can receive an electrical signal from the drive circuitry and a moveable end, the actuator being configured so that the movable end is displaced relative to the substrate on receipt of the electrical signal.

Nevertheless, Silverbrook (US 6588882 B2) teaches an elongate actuator that has a fixed end that is connected to the substrate so that the actuator can receive an electrical signal from the drive circuitry and a moveable end, the actuator being configured so that the movable end is displaced relative to the substrate on receipt of the electrical signal (see col 11, lines 33-66, element 7, and fig 2).

It would have been obvious of one of ordinary skill at the time the invention was made to provide this obvious variation by modifying US application 10/713095 by the aforementioned teaching of Silverbrook (US 6588882 B2) for the purpose of providing a manner in which to efficiently eject ink from the type of apparatus at issue, as taught by Silverbrook (US 6588882 B2).

Claims 1, and 2 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 1, 5, and 6 of copending Application No. 10/713095 in view of Silverbrook (US 6588882 B2). Although the conflicting claims are not identical, they are not patentably distinct from each other because of the teachings of the claimed similar invention and the obvious variation thereof:

a micro-electromechanical device that comprises: a substrate that incorporates drive circuitry (claim 1)

a motion transmitting structure that is fast with the movable end of the actuator, the motion transmitting structure being connected to a working member so that movement of the actuator is translated to the working member (claim 5); and

a covering formation that is positioned on the substrate so that the substrate, the covering formation and the motion-transmitting structure define an air chamber, the actuator being positioned within the air chamber (claim 1);

in which the covering formation includes walls that extend from the substrate and a cover that spans the walls, the motion-transmitting structure being shaped so that the cover and the motion-transmitting structure being shaped so that the cover and the motion-transmitting structure define generally co-planar surfaces that are spaced from, and generally parallel to the substrate, an opening being defined between the cover and the motion-transmitting surface to facilitate relative displacement of the cover and the motion-transmitting surface (claims 5 and 6).

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However, the difference is an elongate actuator that has a fixed end that is connected to the substrate so that the actuator can receive an electrical signal from the drive circuitry and a moveable end, the actuator being configured so that the movable end is displaced relative to the substrate on receipt of the electrical signal.

Nevertheless, Silverbrook (US 6588882 B2) teaches an elongate actuator that has a fixed end that is connected to the substrate so that the actuator can receive an electrical signal from the drive circuitry and a moveable end, the actuator being configured so that the movable end is displaced relative to the substrate on receipt of the electrical signal (see col 11, lines 33-66, element 7, and fig 2).

It would have been obvious of one of ordinary skill at the time the invention was made to provide this obvious variation by modifying US application 10/713095 by the aforementioned teaching of Silverbrook (US 6588882 B2) for the purpose of providing a manner in which to efficiently eject ink from the type of apparatus at issue, as taught by Silverbrook (US 6588882 B2).

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Allowable Subject Matter

Claims 3-7 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Reasons for Indication of Allowable Subject Matter

The following is a statement of reasons for the indication of allowable subject matter:

Claims 3-7 disclose claimed combinations which are not taught by the prior art and are novel and non-obvious features. For example, subsequently cooling the drive circuit layer upon termination of the drive signal, a load formation being connected between the lever arm formation and the working member, a pair of opposed torsion formations that are configured to twist as the lever formation is displaced, and a slotted opening being defined between the roof wall and the lever arm formation to accommodate relative movement of the lever arm formation and the roof wall, are not taught by any prior art or co-pending applications.

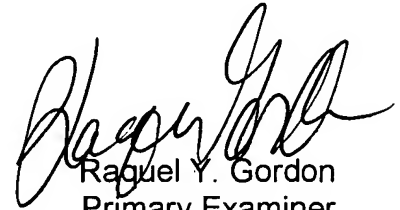
Contact Information

Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Raquel Y. Gordon, whose telephone number is (703) 308-0022. The Examiner can normally be reached on M Tu Th and F 8:30-6:00. Effective February 11, 2003, Ex. Gordon, can be reached at the new PTO facility at (571) 272-2145.

If attempts to reach the examiner by telephone are unsuccessful, the Examiner's supervisor, Stephen Meier can be reached on 703-308-4896. Effective February 11, 2003, the supervisor can be reached at the new PTO facility at (571) 272-2149. The fax phone number for the organization where this application or proceeding is assigned is (703) 305-3432. A new fax number will be forthcoming.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956. A new status inquiry number will be forthcoming.

A handwritten signature in black ink, appearing to read 'Raquel Y. Gordon', is written over the typed name.

Raquel Y. Gordon
Primary Examiner
Art Unit 2853
May 12, 2003

**RAQUEL GORDON
PRIMARY EXAMINER**